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**NATIONAL PHOTOGRAPHIC
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PHOOTOGRAPHIC
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REPORT

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**KUZNETSOVO ENGINE TEST FACILITY
USSR (S)**

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APRIL 1979

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25X1**KUZNETSOVO ENGINE TEST FACILITY, USSR (S)**

1. (S) This report provides an initial description of the Kuznetsovo Engine Test Facility in the USSR. This report includes a location map, one annotated photograph, and a line drawing.

DESCRIPTION

2. (S) The Kuznetsovo Engine Test Facility [REDACTED], formerly the Kuznetsovo Probable Aircraft Engine Test Facility, is situated in a level, heavily-wooded area 32.5 nautical miles (nm) southeast of Moscow (Figure 1). This facility is 12.5 nm east-southeast of the Ramenskoye Flight Test Center [REDACTED] and 4.5 nm north-northwest of the Faustovo Aerospace Research and Development Facility [REDACTED]. There are direct rail and road connections between the Kuznetsovo facility and the Faustovo facility.

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3. (TSR) The Kuznetsovo Engine Test Facility (Figure 2) was in the midstage of construction when last observed on imagery acquired in August 1978. At that time, the facility occupied a partially secured area of approximately 35 hectares and consisted of 29 buildings and structures. The facility is road and rail served with two road entrances and one rail entrance. No special security measures, i.e., guard towers, lights, or security dog kennels, were observed. An electrical power substation is approximately 75 meters west of the facility.

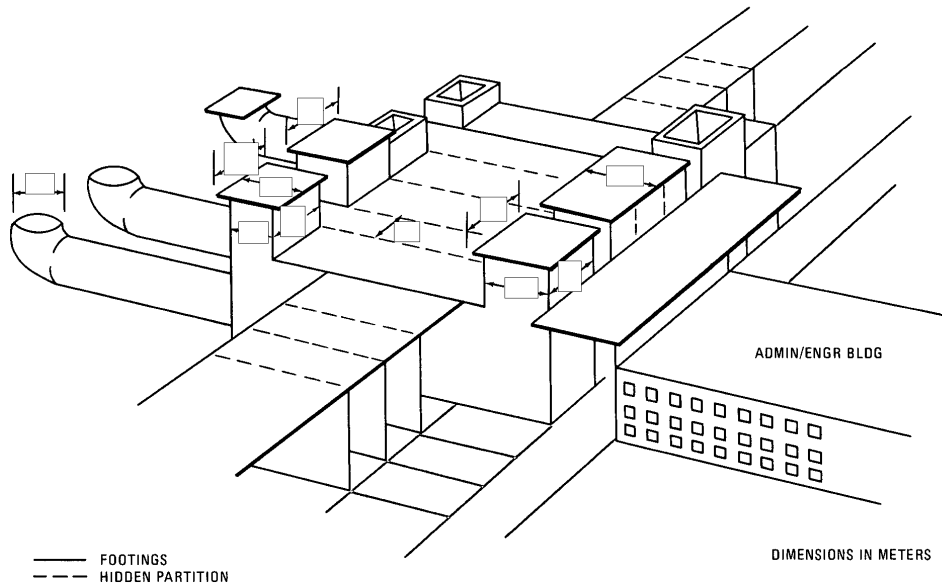
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FIGURE 3. TEST CELLS AT ENGINE TEST BUILDING UNDER CONSTRUCTION AT KUZNETSOVO ENGINE TEST FACILITY

4. (TSR) As of August 1978, 23 of the 29 buildings and structures at Kuznetsovo Engine Test Facility were complete (Figure 2). The completed buildings included a large, oil-fired heating plant, a large rail-served transshipment building, three shop buildings, two maintenance buildings, three vehicle storage buildings, a fuel oil pumping/metering station, and four general-purpose support buildings. Structures considered to be complete in August 1978 included two above-ground fuel oil storage tanks, an earth-mounded storage bunker, two masonry stacks, an underground water storage tank, and two general-purpose support structures. The six buildings and structures under construction in August 1978 included a large assembly/checkout building, a large engine test building, an administration/engineering building, a fire station, a shop building, and an underground water storage tank. (The inset table on Figure 2 shows the major buildings and structures, both complete and under construction, at the facility.)

5. (TSR) The most prominent feature of the Kuznetsovo facility is the complex formed by the engine test building, the assembly/checkout building, and the administration/engineering building (Figure 2). Construction observed between March 1976 and August 1978 indicates that this complex will cover approximately 6.1 hectares or 17.4 percent of the Kuznetsovo facility.

6. (TSR) The engine test building (item 2, Figure 2) was in the midstage of construction when last observed in August 1978. Construction progress observed at that time indicated that the engine test building would contain at least 16 engine test cells and eight control/shop sections. However, ground scarring/survey marks observed in August 1978 indicated that this building could contain as many as 24 engine test cells and 12 control/shop sections. This building should contain at least [REDACTED] of floorspace.

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7. (TSR) Each test cell (Figure 3) will have an overall length of approximately [REDACTED]. The test chamber in each test cell will be approximately [REDACTED]. Each test chamber will have a primary and a secondary air inlet. The primary air inlet will be approximately [REDACTED] with an air shaft of approximately [REDACTED]. The secondary air inlet will be approximately [REDACTED] with an air shaft of approximately [REDACTED]. Each air inlet will be protected by a stationary roof cover. The roof cover for the primary air inlet will be approximately [REDACTED] and that for the secondary air inlet will be approximately [REDACTED]. Construction progress in August 1978 indicated that the roof covers on the air intakes of adjoining test chambers will be connected and appear to be one unit.

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8. (TSR) Each control/shop section will be approximately [REDACTED] The test control/monitoring station in each control/shop section will probably be capable of simultaneously monitoring test activity in two test chambers. The shop space in each control/shop section will probably be used for checkout and preparation of the test article prior to its insertion into the test chamber, as well as preliminary checkout of the test article after the test has been completed. It could also be used for repair and maintenance of those items that can be removed from the test chamber.

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9. (TSR) The assembly/checkout building (item 5, Figure 2) will consist of a two-story engineering/shop section and a single-story, high-bay assembly/checkout section. When completed, this building will contain approximately [REDACTED] of floorspace. Ground scarring/survey marks adjacent to the western end of the building may be an indication of the addition of a multistory administration/engineering section with at least [REDACTED] of floorspace per floor. The three-story administration/engineering building (item 4) will contain approximately [REDACTED] of floorspace when completed.

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10. (TSR) The size of the test chambers and the exhaust systems under construction at the Kuznetsovo facility indicate that the engine test cells were designed to accommodate engines requiring a high-mass airflow. Engines in this category include the following: (a) high-bypass-ratio engines required by the Soviet aircraft industry, (b) engines required by the Soviet missile industry for endoatmospheric missiles and missile stages, and (c) a combination rocket-airbreathing engine that could be utilized in a reusable launch vehicle. Engine test cells similar in size to those under construction at the Kuznetsovo facility are also present at Omsk Aircraft and Missile Engine Plant Baranova 29 [REDACTED] and at Omsk Rocket Engine Test Facility Gornaya Bitiya [REDACTED]. The engine test cells under construction at Tyumen Aircraft Engine Plant [REDACTED] are also similar in size to those under construction at the Kuznetsovo facility.

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11. [REDACTED] At the present time, there is no evidence to suggest that the Kuznetsovo facility is associated exclusively with the testing of aircraft engines or is associated exclusively with the testing of missile/rocket engines. However, it is highly probable that the Kuznetsovo facility is a planned expansion of the engine test facilities at the Faustovo Aerospace Research and Development Facility and will be used as a remote testing facility for both aircraft and missile/rocket engines. Suggesting this association is the fact that while the Faustovo facility is the primary testing facility utilized by V.N. Chelomey, a leading Soviet missile designer, it has also been used as a remote testing facility by some of the Moscow-based aircraft design and testing organizations.¹ Other indications of an association between the Kuznetsovo facility and Faustovo facility include their proximity (4.5 nm apart) and the fact that direct road and rail connections exist between the two facilities.

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REFERENCES

IMAGERY

(TSR) All available KEYHOLE imagery acquired between [REDACTED] [REDACTED] was used in the preparation of this report.

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MAPS OR CHARTS

DMAAC. US Air Target Chart, Series 200, Sheet FP0167-5HL, 5th ed, Oct 78, scale 1:200,000 (SECRET) [REDACTED]

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DOCUMENT

1. NPIC. RCA-09/0023/76, [REDACTED] *Activity and Development at Selected Soviet Rocket Engine Test Facilities*, May 76 (TOP SECRET) [REDACTED]

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RELATED DOCUMENT

NPIC. RCA-09/0050/74, [REDACTED] *Faustovo Aerospace Research and Development Facility*, May 74 (TOP SECRET) [REDACTED]

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REQUIREMENT

Project 130065NJ

(S) Comments and queries regarding this report are welcome. They may be directed to [REDACTED] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [REDACTED]

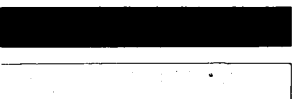
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